

## United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,686	08/05/2003	Yukie Nakano	109639.01	6866
	590 06/15/2006		EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928			LOPEZ, CARLOS N	
ALEXANDRIA, VA 22320			ART UNIT	PAPER NUMBER
			1731	
		DATE MAILED: 06/15/2006		

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	10/633,686	NAKANO ET AL.				
Office Action Summary	Examiner	Art Unit				
	Carlos Lopez	1731				
The MAILING DATE of this communication app	L	orrespondence address				
Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from 1, cause the application to become ABANDONE	I.  lely filed  the mailing date of this communication.  D (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on						
,— · · · · · · · · · · · · · · · · · · ·	action is non-final.					
•—	,—					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4)⊠ Claim(s) <u>1-4</u> is/are pending in the application.						
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-4</u> is/are rejected.						
· - · · · - · · · · · · · · · · · · · ·	7) Claim(s) is/are objected to.					
8) Claim(s) are subject to restriction and/or election requirement.						
Application Papers						
9) The specification is objected to by the Examiner.						
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) ☐ The oath or declaration is objected to by the Ex	aminer. Note the attached Office	Action or form PTO-152.				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)						
1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)						
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Da	ite				
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8/5/03</u> .	5)  Notice of Informal P 6)  Other:	atent Application (PTO-152)				

Application/Control Number: 10/633,686

Art Unit: 1731

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al (US 5,319,517) in view of JP 11-103022 ('022). Nomura disclose a method of making a multilayer ceramic capacitor (See abstract). The method comprises firing a green chip to be a capacitor element body comprising dielectric layers and internal electrode layers in a reducing atmosphere (See Col. 10, lines 50-56) and performing a heat processing under an atmosphere in which the oxygen partial pressure is higher than the reducing atmosphere (See Col. 10, lines 59-63). Nomura is silent disclosing the size of the particles making up the dielectric layers. However, '022 teaches that particles of dielectric layers have a diameter larger than the thickness of the dielectric laver (See machine translation of paragraph 7) in order to provide a specific inductive capacity, high insulation, and reducing crack initiation (see machine paragraphs 4-5). Hence, at the time the invention was made it would it have been obvious to a person of ordinary skill in the art to have used particles of dielectric layers have a diameter larger than the thickness of the dielectric layer for Nomura's capacitor in order to provide a specific inductive capacity, high insulation, and reduction in crack initiation as taught by '022.

Application/Control Number: 10/633,686 Page 3

Art Unit: 1731

As for claim 2, the temperature after firing is 1000°C as shown in Col. 10, lines 59-65 of Nomura.

As for claims 3-4, the oxygen partial pressure is 10<sup>-3</sup>Pa as shown in Col. 10, lines 59-65 of Nomura.

## Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Page 4

Application/Control Number: 10/633,686

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CL